

CLAIMS

1. A composition comprising a plurality of amphoteric water-soluble polymers obtained by polymerizing a cationic radical-polymerizable monomer and an anionic radical-polymerizable monomer in a presence of a polysaccharide, in which the plurality of polymers comprise an amphoteric polymer satisfying the following expression (1) (hereinafter referred to as amphoteric polymer (1)) in combination with an amphoteric polymer 5 satisfying the following expression (2) (hereinafter referred to as amphoteric polymer (2)) or an amphoteric polymer satisfying the following expressions (3) and (4) 10 (hereinafter referred to as amphoteric polymer (3)):

$$Ca_1/An_1 \geq 1 \quad \dots \quad (1)$$

15 $Ca_2/An_2 < 1 \quad \dots \quad (2)$

$$Ca_3/An_3 \geq 1 \quad \dots \quad (3)$$

$$|(Ca_1-An_1)-(Ca_3-An_3)| \geq 1.5 \quad \dots \quad (4)$$

wherein, in the expressions (1)-(4), Ca_1 and An_1 respectively represent the total mole number of the 20 cationic monomer units and the total mole number of the anionic monomer units in the amphoteric polymer (1) on a condition that the total mole number of all the constituent monomer units in the amphoteric polymer (1) is converted to be 100 mol; on a condition similar to the 25 above, Ca_2 and An_2 respectively represent the total mole number of the cationic monomer units and the total mole number of the anionic monomer units in the amphoteric

polymer (2); and on a condition similar to the above, Ca_3 and An_3 respectively represent the total mole number of the cationic monomer units and the total mole number of the anionic monomer units in the amphoteric polymer (3).

- 5 2. A polymer flocculant which comprises the composition defined in claim 1.
3. A sludge-dewatering agent which comprises the polymer flocculant defined in claim 2.
4. A process for dewatering sludge, which comprises adding the sludge-dewatering agent of claim 3 to sludge, and then conducting dewatering.
5. A retention aid which comprises the polymer flocculant defined in claim 2.
6. A papermaking process which comprises adding the retention aid of claim 5 to stuff, and then conducting papermaking.